then women. More earlier stages of lung cancer were diagnosed in pts with COPD. In pts with direct tumor changes found during bronchoscopy was tumor verified in 95%, with indirect tumor changes in 54% and in pts with normal bronchoscopy in 20%. Morphological types of lung cancer was assessed in 216 pts. Squamous cell and adenocarcinoma were the most frequent types, in 23% resp. in 20%. Adenocarcinoma was the most frequent type in nonsmoking pts (22 %). 91 pts (34 %) were diagnosed in potentially resectable stages I - IIIA, however only 42 pts underwent surgery, 7 of them in higher stages. The reasons for inoperability in 56 potentially resectable pts were as follows: age over 80 years with polymorbidity in 12, bad general status in 10, COPD stage III-IV in 9, congestive heart failure in 5, refusing of surgery in 5 pts and other reasons in 15.

Conclusions: The diagnosis of lung cancer was late in 67 % of studied pts. Lung cancer was diagnosed in significantly lower age in current smokers and in earlier stages in COPD pts. The most frequent reasons for inoperability in potentially operable pts were severe COPD and polymorbidity. Pts with direct tumor changes found during bronchoscopy were verified in 93%, with normal findigs in 20%.

Clinical Implications: Information about the lower age of onset of lung cancer in current smokers, about coincidence of earlier stages of lung cancer with COPD and stated probability of verification during bronchoscopy may help to physicians to improve the diagnosis of lung cancer.

P1-024 **Chest Medicine and Intervention Posters, Mon, Sept 3**

Relationship between tyrosine kinase domain gene mutations of epidermal growth factor receptor and respiratory function in non-small cell lung cancer

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Background: Tyrosine kinase domain (TKD) gene mutations of the epidermal growth factor receptor (EGFR) have reported to be clinically important in non-small cell lung cancer (NSCLC). However, relationships between EGFR TKD mutations and respiratory function or radiological imaging in adjacent lung tissue have not ever evaluated. The purpose of this study was to elucidate the correlations between EGFR TKD mutations and some respiratory parameters by spirometry or findings of chest computed tomography (CT) in NSCLC.

Methods: A total of 88 consecutive Japanese patients with NSCLC were preoperatively examined spirometry in the Department of Laboratory Medicine, chest CT in the Department of Radiology, and underwent surgery in the Department of Thoracic Surgery at Kyorin University Hospital between January 2001 and December 2003. Forced expiratory volume in one second (FEV1.0) / forced vital capacity (FVC) (FEV1.0%, low FEV1.0% < 70%, normal FEV1.0% ≥ 70%) and diffuse capacity of the lung for carbon monoxide (DLCO) per unit of alveolar volume (VA) / predicted DLCO/VA (%DLCO/VA, low %DLCO/VA < 70%, normal %DLCO/VA ≥ 70%) evaluated as parameters for respiratory function, and emphysematous or fibrotic appearance in adjacent lung tissue on chest CT was integrated into the analysis. We investigated EGFR TKD mutations using direct sequencing in samples from 88 NSCLC patients, and the correlations with respiratory function or imaging in adjacent lung on chest CT was analyzed.

Results: EGFR TKD mutations were detected in 25 of 88 NSCLC (28%). Presence of EGFR TKD mutations was significantly correlated with adenocarcinoma histology (p=0.004), but not sex, smoking status, age, and tumor staging by multivariate analysis. By univariate analysis, EGFR TKD mutations were significantly related with normal FEV1.0% (p=0.017), normal %DLCO/VA (p=0.004), and no emphysematous (p=0.001) or no fibrotic appearance (p=0.014) on chest CT. Among these factors, EGFR TKD mutations were significantly correlated with normal FEV1.0% (p=0.048) by multivariate analysis.

Conclusions: These results suggest that EGFR TKD mutations are associated with good respiratory function such as normal FEV1.0% in NSCLC patients. We consider that the correlation may be very important to investigate into a role in pathogenesis of NSCLC with mutated EGFR TKD gene.

P1-025 **Chest Medicine and Intervention Posters, Mon, Sept 3**

Two cases of fatal hypoxemia after talc pleurodesis for malignant pleural effusion

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Talc pleurodesis is the safe and effective treatment for recurrent malignant pleural effusion but acute hypoxemia, pulmonary edema or acute respiratory failure could develop in small number of patients.

We report 2 cases who developed fatal hypoxemia after talc pleurodesis. The first case was 18-year old male who was diagnosed of Ewing's sarcoma with bilateral lung metastasis and pleural effusion. The performance status was ECOG (Eastern Cooperative oncology Group, ECOG) grade 3. Ten hours after the second talc pleurodesis on the right side for uncontrolled pleural effusion, fever developed, along with hypoxemia and leukocytosis and the patient finally died of respiratory failure after 13 days. The second case was 66-year old female who was diagnosed of non-small cell lung cancer with bone metastasis. Two weeks after systemic chemotherapy, she complained of dyspnea, and pleural effusion on the right side was observed. Her performance status was ECOG grade 3. Talc pleurodesis was performed for recurrent pleural effusion, and hypoxemia developed 6 days after pleurodesis and died 10days after pleurodesis due to respiratory failure.

In conclusion, talc pleurodesis should be performed very carefully in patients with poor performance status, in cases of repeated pleurodesis, bilateral pleural effusion, recent chemotherapy, radiotherapy and when parenchymal metastatic lesions are present.

P1-026 **Chest Medicine and Intervention Posters, Mon, Sept 3**

Computer tomographic-guided transthoracic needle aspiration biopsy in the diagnosis of intra-thoracic malignant disease - 5 years in review

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Introduction: Transthoracic Needle Aspiration Biopsy was first performed 120 years ago. Technique performance improvement and